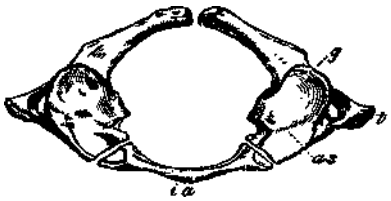
atlas, and articulates with the skull. The most remarkable fact about this bone (shared, however, by lower Vertebrates) is that its centrum is detached from it and attached to the next vertebra, in connexion with which it will be referred



jpia. 7.—Human atlas (young), showing development. x^. *as?* Articular surface for occiput ; <7, groove for lirst spinal nerve and vertebral artery; %«, inferior arch; canal. (From Flower's *OstevtiH(y.)*

Fio. 8.—Inferior surface of atlas of Dog. x J. *sn*r ForjuTien for lirst spinal nerve ; -w, vertebrartttrial *t*ₜ transverse process. (From Flower's *Osteology.)*

to immediately." The whole bone thus gets a ring-like form, and the salient processes of other vertebrae are but little developed, with the exception of the transverse processes, which are wide and wing - like. In many Marsupials, such as the Wombat and Kangaroo, the arch of the atlas is open below, there

Fig. 9.—Atlas of Kangaroo. . . . (From Parker and Haswell*s *ZoologyJ)*

being no centre of ossification. In others, such as *Thylwvrwts,* there is a distinct nodule of bone in this situation not concrescent with the rest of the arch.

The second vertebra, which is known as the axis or epistropheus, is a compound structure, the anterior " odontoid process," which fits into the ring of the atlas, being iii reality the detached centrum of that vertebra.[1] It is a curious fact about that process that it has independently become spoon-shaped in two divisions of Ungulates; that it has become so seems to be shown by the fact that in the earlier types of both it has the simple peg-like form, which is the prevailing form. The cervical

[1] Its independence from the cpistropheiis is emphasised in Monotremes and iiae* Marsupials by its late fusion with that vertebra.